Open Access: Background and Tools for Early Career Researchers in Social Sciences

Workshop prepared for the Berlin Summer School in Social Sciences

Philippe Joly

jolyphil@hu-berlin.de
Humboldt-Universität zu Berlin
&
WZB Berlin Social Science Center

18 July 2018

—

Reuse of the material

All the material of this workshop (the outline, the slides, and the bibliography) can be cloned or downloaded from GitHub:
https://github.com/jolyphil/oa-workshop

—

Acknowledgements

This workshop was prepared as part of the Freies Wissen Fellowship sponsored by Wikimedia Deutschland, the Stifterverband, and the VolkswagenStiftung. It largely benefited from the webinar on open access presented by Christina Riesenweber (FU-CeDiS) and Agnieszka Wenninger (FU-CeDiS) on January 31, 2018, as part of the Freies Wissen Fellowship. Part of the references were found on the Open Science MOOC. Alessandro Blasetti (WZB) provided useful resources on OA licenses.

Figure 1: Logo of the Fellowship "Freies Wissen". Source: Wikimedia Deutschland (2018). License: CC BY-SA 3.0.

Overview

- Objectives
  1. Give early career researchers in social sciences a **basic knowledge** of open access (focus: papers).
  2. Present useful **tools**.
- Structure
  1. What is wrong with the subscription-based publication system?
  2. What is open access publishing?
  3. *Discussion*
  4. What is the share of open access publications and what is their impact?
  5. Which license should you choose?
  6. How to find funding for your open access publication?
  7. *Practical examples*
  8. *Q&A*

Figure 2: Scientific information is locked behind paywalls. Source: John R. McKiernan from the Why Open Research? (n.d.) project. License: CC BY 4.0.

What is wrong with the subscription-based system?

Background

- Journal articles are one of the oldest ways of communicating research results (350 years).
- For long, journals were mostly managed by academic societies.
- But there was a turn after the Second World War:
  1. More **specialization** and an **increase in the number of journals**.
  2. Creation and **acquisition** of journals by commercial publishers.
  3. Adoption of **impact factors** as main metric of scientific achievement.
  4. Commercial publishers secure their hold on **"A" journals** (Buranyi, 2017).

The digital turn and the consolidation of the Big Five

- Things got **worse** in the digital era (Larivière, Haustein, & Mongeon, 2015).
- Acquisitions of small journals continued.
- This led to the consolidation of the **"Big Five:"**
  1. Elsevier
  2. Wiley-Blackwell
  3. Springer
  4. Taylor & Francis
  5. Sage

"Big deals"

- Libraries stop subscribing to individual journals.
- They subscribe to entire online catalogs.
- "Big deals" mean almost zero marginal costs for publishers.
- Libraries become a captive market, prices skyrocket.
- The Big Five now publish **50%** of all scientific papers each year (Larivière et al., 2015).

The Big Five in social sciences and humanities

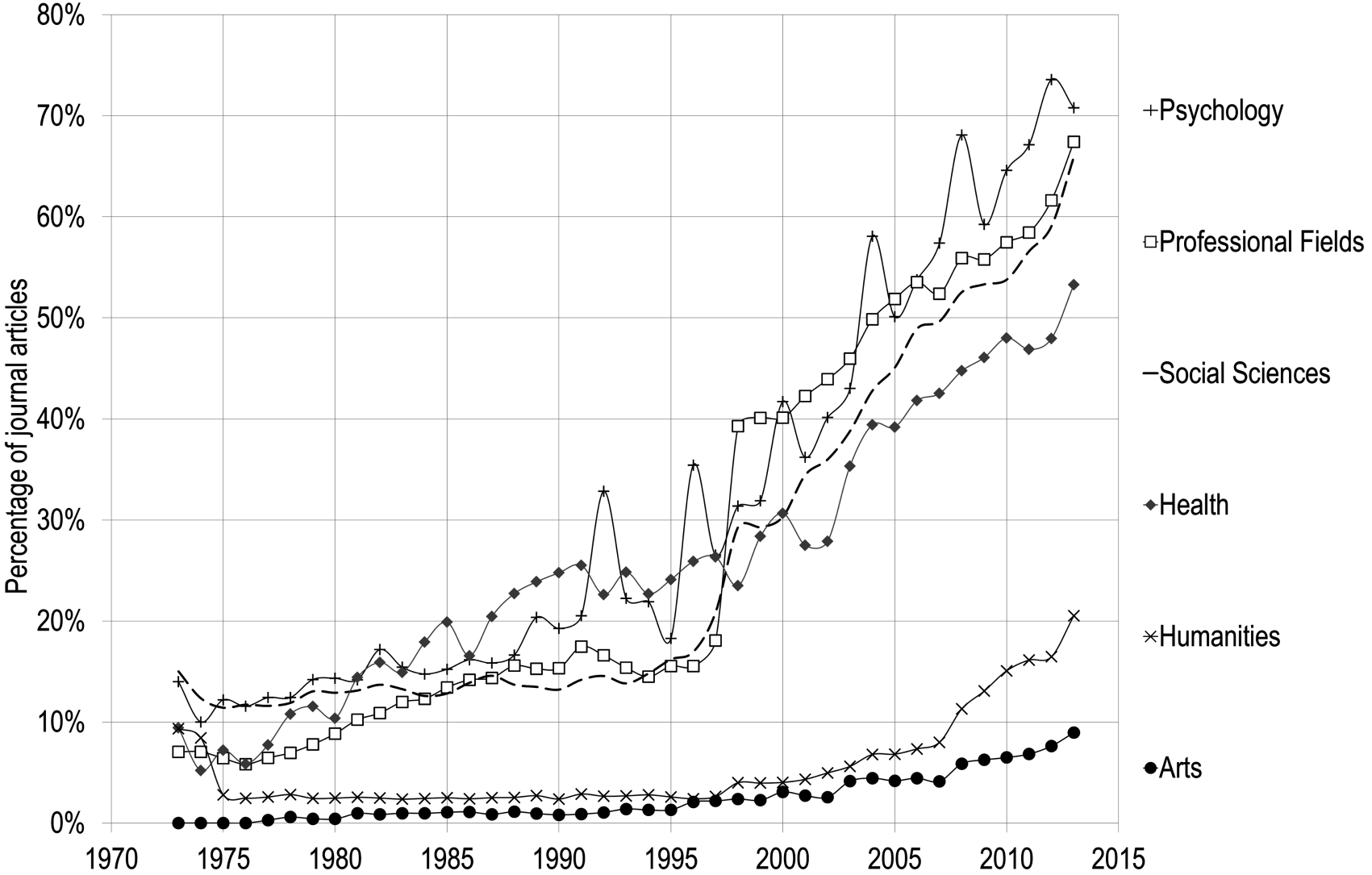


Figure 3: Percentage of papers published by the five major publishers, by discipline of social sciences and humanities. Source: Larivière et al. (2015). License: CC BY 4.0.

The trap

- The current publishing system is a **system of exploitation**.
- Most of the work is carried out **for free** by authors and reviewers.
- There is no competition in the academic publishing sector.
- Publishers have tremendous power over the access to knowledge.
- Publishers are big enough to impose their conditions (e.g. Elsevier: **25%** of the entire scientific literature).

An extremely lucrative business

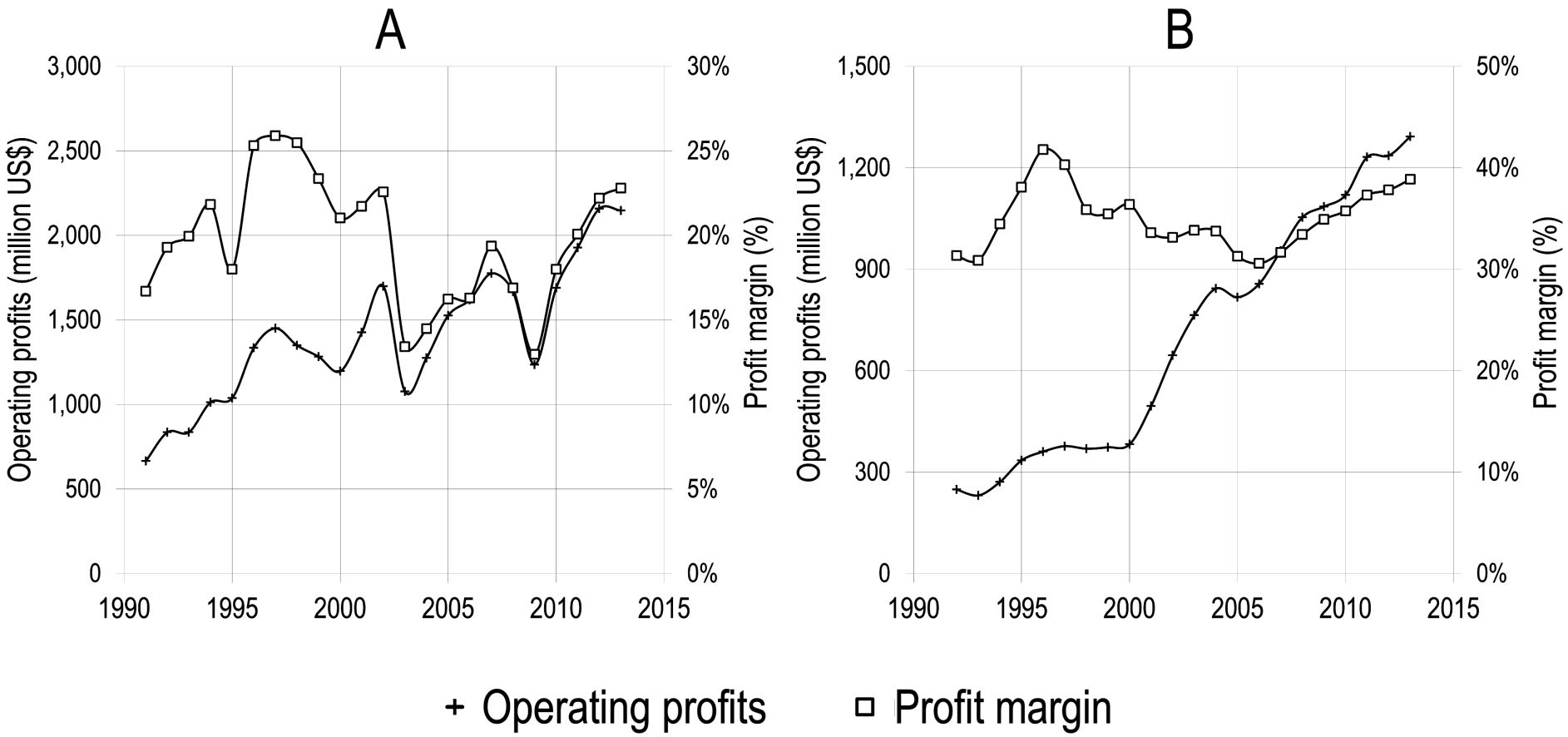


Figure 4: Operating profits (million USD) and profit margin of Reed-Elsevier as a whole (A) and of its Scientific, Technical & Medical division (B), 1991-2013. Source: Larivière et al. (2015). License: CC BY 4.0.

Consequences

- Governments (the public) pay twice for research and access to the literature.
- Libraries are no more capable of affording the publishers' "big deals."
- With cancellations, students and researchers loose access to large portions of the scientific literature.
- The public and institutions with less funding (especially in low- and middle-income countries) are kept in the dark.

What is open access publishing?

Open access: common ground

- Basic elements:
  1. "OA articles are **free to read online**" (Piwowar et al., 2018).
  2. + **Legal access**: with an explicit OA license.
  3. + **Sustainable access**: stored on a repository with a sustainable server infrastructure (Martín-Martín, Costas, Leeuwen, & López-Cózar, 2018).
- Ideally, users should also have the right to:
  - "... read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself." (Budapest Open Access Initiative, 2017)

Gold OA

- Articles are made **immediately** available by a journal that publishes **exclusively** in open access.
- Authors retain their copyright.
- Gold OA journals are funded by **article processing charges (APCs)** or other models (partnerships with institutions or funders).
- APCs range from a few hundreds to 5000 EUR (for social sciences: typically 400-1000 EUR).
  - Palgrave Communications (1000 EUR)
  - Politics and Governance (900 EUR, partnership schemes available)
  - Sage Open (APC: 395 USD)
  - Open Library of the Humanities (free)
  - PArtecipazione e COnflitto (free)
  - Journal of World-Systems Research (free)

Hybrid OA

- Articles are published in subscription-based journal.
- Authors acquire an OA license by paying APCs.
- Usually more expensive (around 3000 USD).
- The big publishers usually offer a hybrid OA option (e.g. Sage Choice, Elsevier Open Access).
- Danger: **“double-dipping”**

Green OA: basic definition

- Green OA is an **easy** and **free alternative** to gold or hybrid OA.
- Researcher self-archive their papers on online repositories.

Green OA: preprints, postprints, and published versions

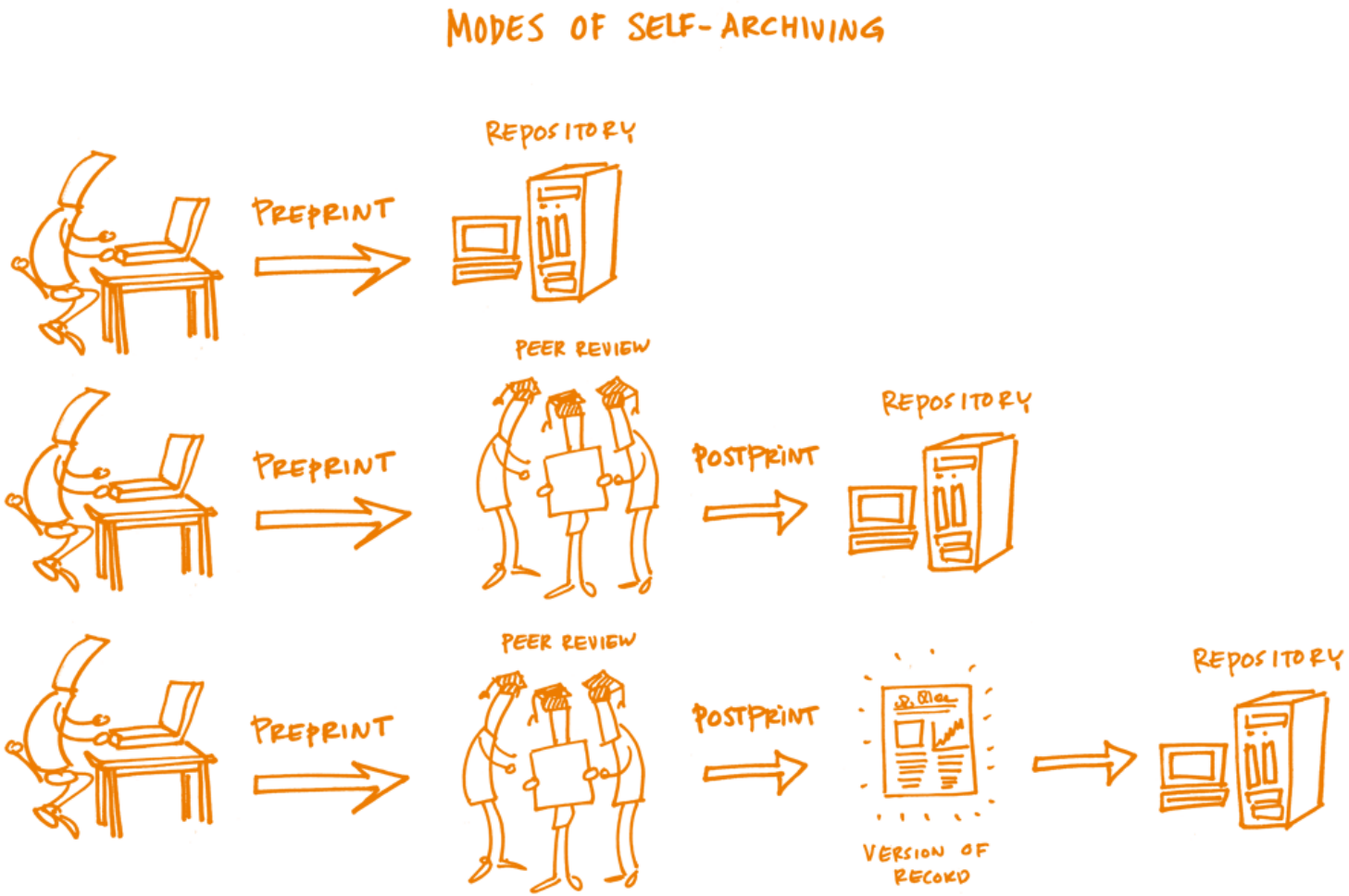


Figure 5: Modes of self-archiving. Source: Bezjak et al. (2018). License: CC0 1.0.

Green OA: which version of a paper should you post online?

- Each journal has its own self-archiving policy.
- Find out about this policy **before** submitting your paper or uploading it on an online repository.
- The best place to find out is **SHERPA RoMEO**, a database of journal self-archiving policies.
- SHERPA RoMEO uses a color code:
  - **Green** journals allow authors to archive pre and postprints.
  - **Blue** journals allow authors to archive postprints.
  - **Yellow** journals allow authors to archive preprints.
  - White journals do not formally allow archiving.

Green OA: green, blue, yellow, and white journals

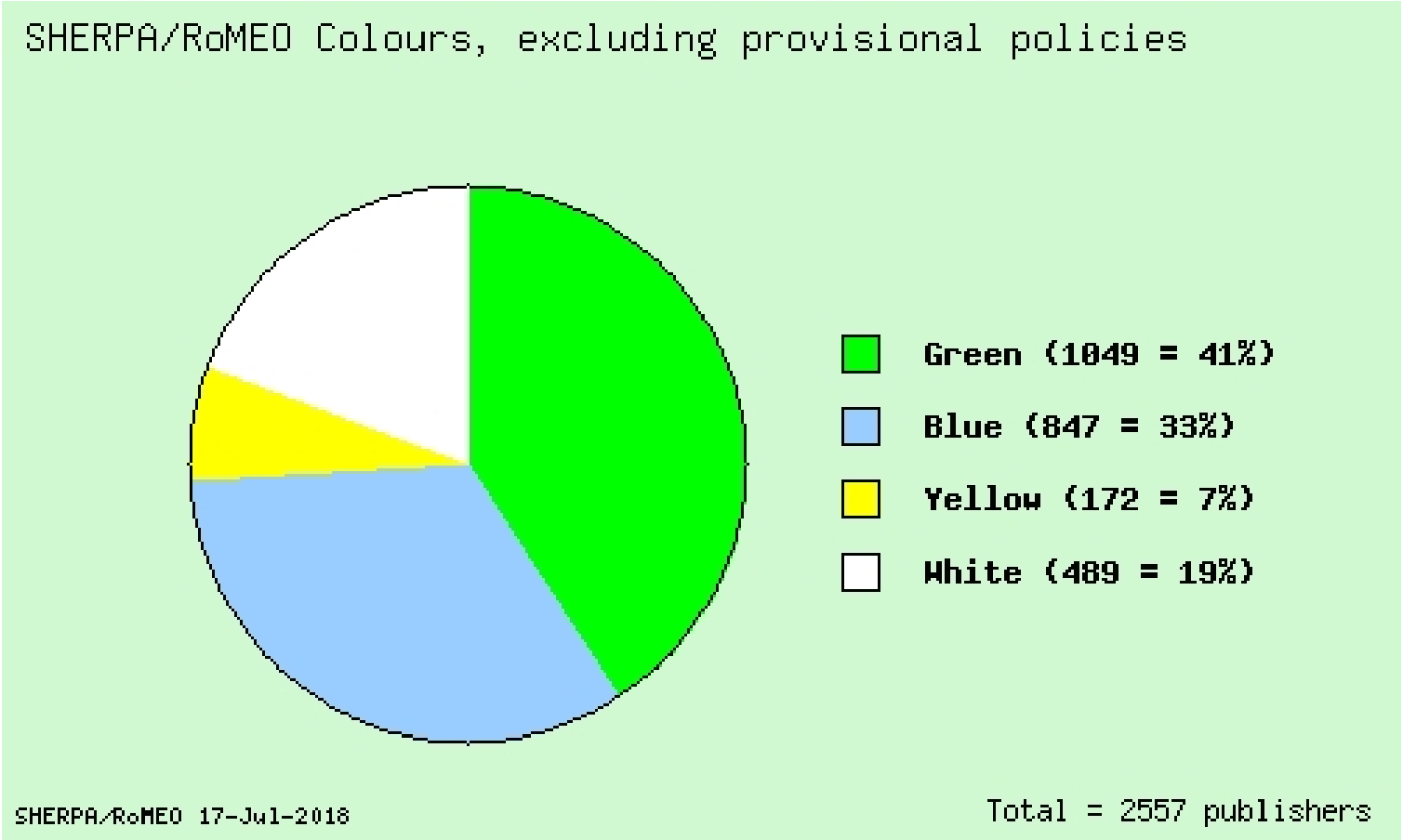


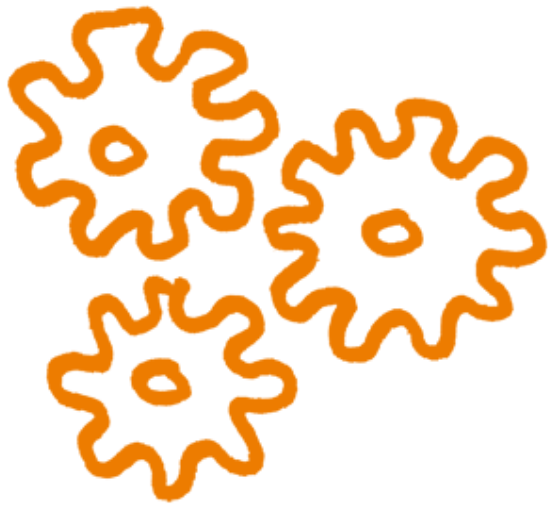
Figure 6: Share of green, blue, yellow, and white journals in the SHERPA RoMEO database. Source: SHERPA RoMEO (2018). License: CC BY-NC-ND 2.0 UK.

Green OA: more on preprints

- Preprints allow authors to make early research findings available to the entire connected world for free.
  1. You upload a paper to a public repository.
  2. The paper goes through a moderation process that assesses the scientific character of your work.
  3. The paper is made available online.
- No wait, "I won't be able to get published"
  - About **half** of all academic journals allow preprints.
- No wait, "I will get scooped"
  - Preprints provide a **"record of priority"** (Bourne, Polka, Vale, & Kiley, 2017).

Green OA: where should you post your paper?

- Three options
  1. On an institutional (university) repository
     - ★ Example: HU's edoc-Server
  2. On a thematic repository
     - ★ Example: SocArXiv
  3. On a general repository
     - ★ Example: Zenodo
- A good repository:
  - has a sustainable server infrastructure,
  - allows you to store supplementary material (code and data),
  - offers a permanent identifier (usually a DOI) for your project.



Small group discussion: pros and cons

Participants join small groups and discuss what are the advantages and disadvantages of different models of OA publishing: green, gold, and hybrid.

We regroup in plenary to share our main conclusions.

What is the share of open access publications in the scientific literature and what is their impact?

A new push for OA

- The share of OA papers has increased dramatically over the last 20 years.
- This is driven by different factors:
  1. Funding institutions require projects to publish their results in OA.
  2. OA publications are easily findable with tools like Google Scholar and the **Unpaywall** browser extension (highly recommended).
  3. Academic social networks (ResearchGate and Academia.edu) are encouraging the diffusion of OA papers.
  4. Universities are canceling subscriptions and looking to OA as an alternative (Piwowar et al., 2018).
- Best evidence of the growth of OA: Study by Piwowar et al. (2018).

The prevalence of OA

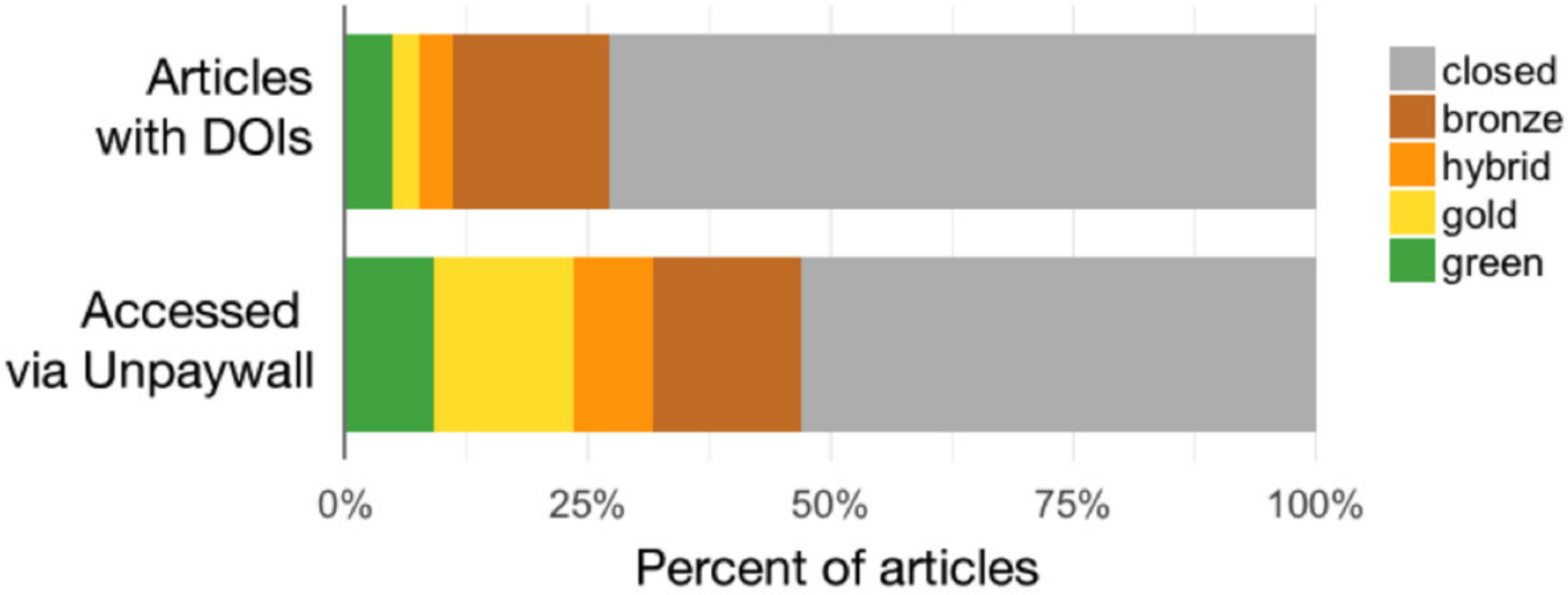


Figure 7: Percent of articles by OA status, Crossref-DOIs sample vs Unpaywall-DOIs sample. Source: Piwowar et al. (2018). License: CC BY 4.0.

Growth over time

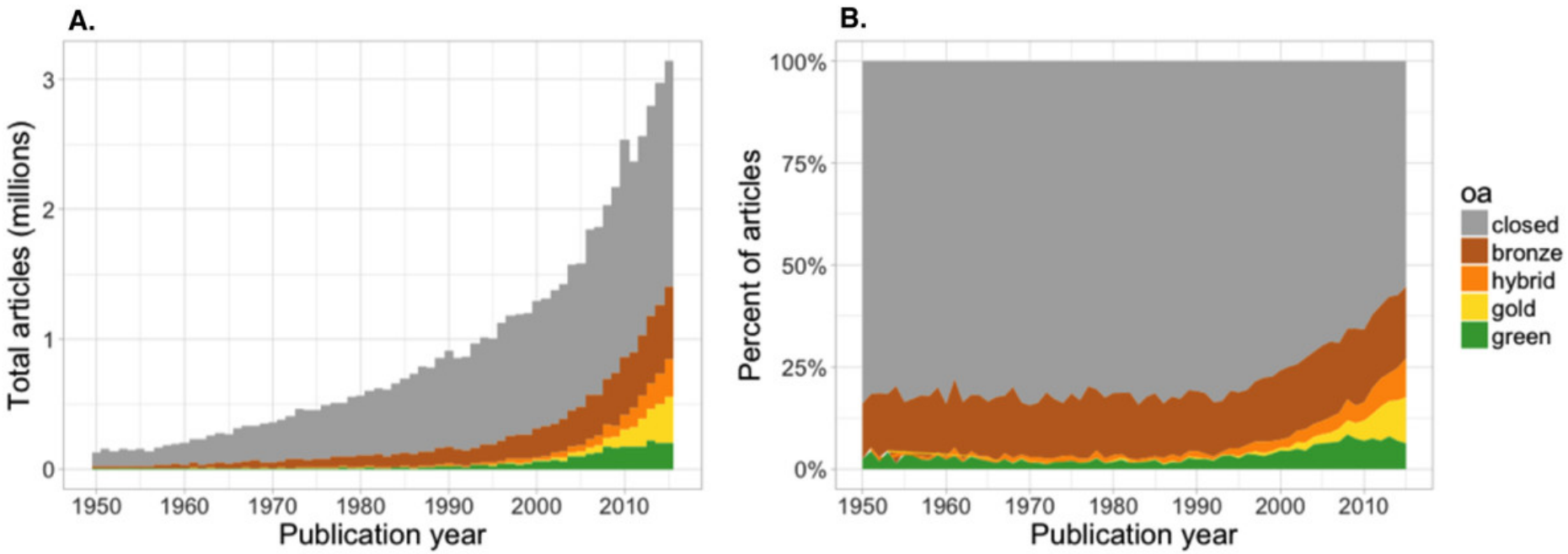


Figure 8: Number of articles (A) and proportion of articles (B) with OA copies, estimated based on a random sample of 100,000 articles with Crossref DOIs. Source: Piwowar et al. (2018). License: CC BY 4.0.

Prevalence of OA by discipline

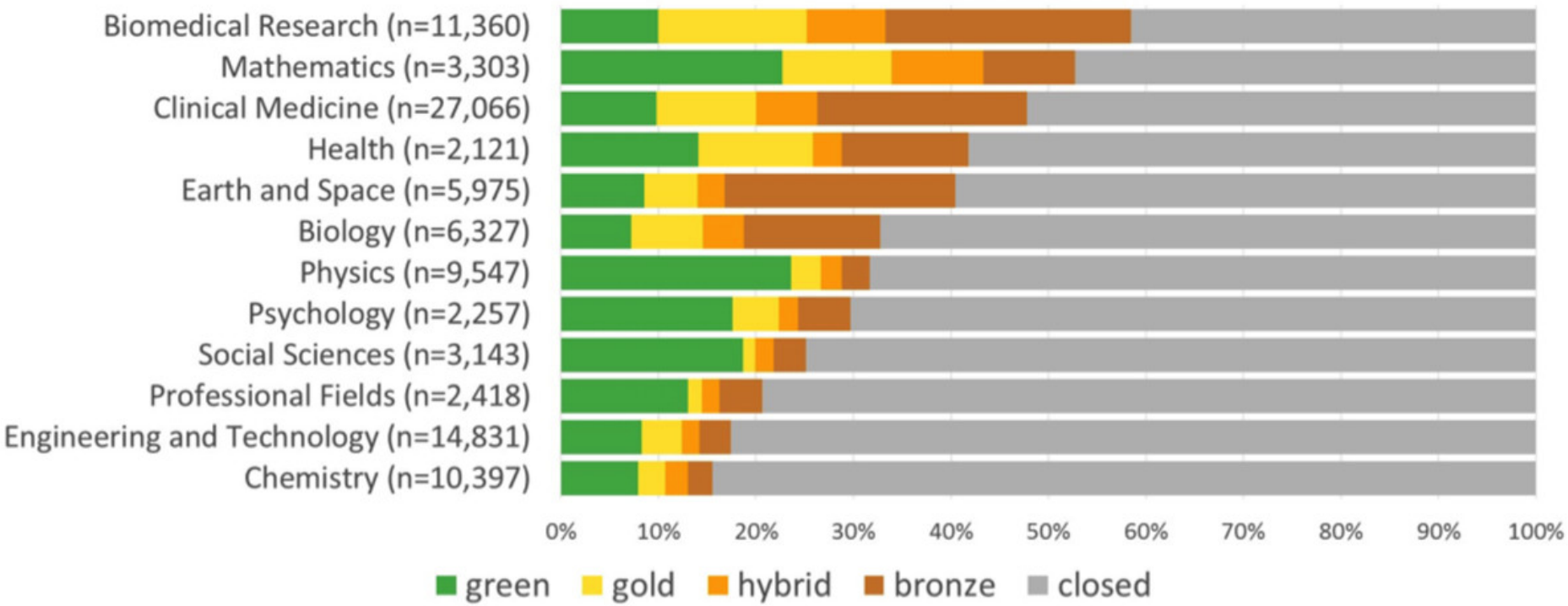


Figure 9: Percentage of different access types of a random sample of WoS articles and reviews with a DOI published between 2009 and 2015 per NSF discipline (excluding Arts and Humanities). Source: Piwowar et al. (2018). License: CC BY 4.0.

The impact of OA publications

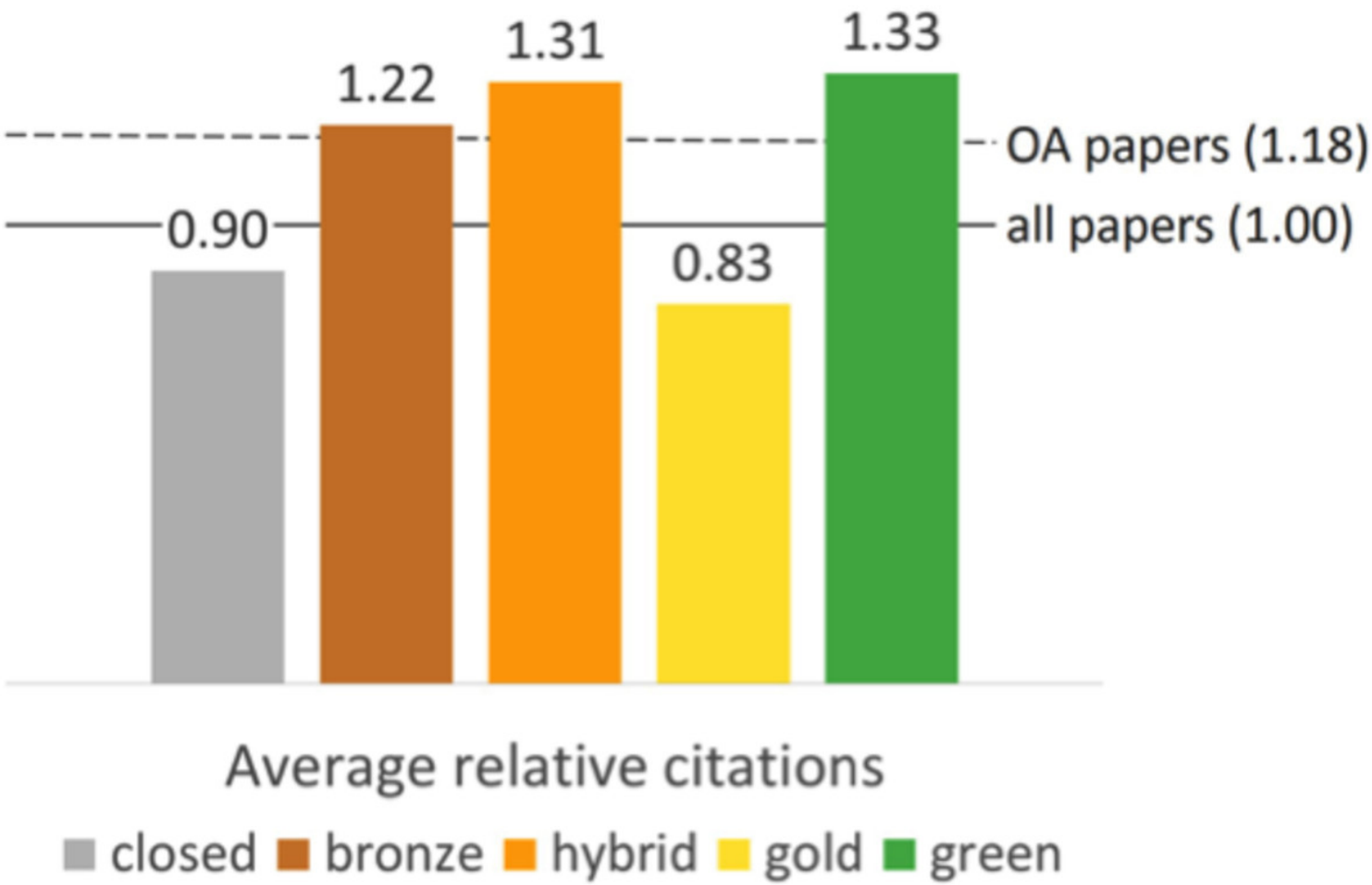


Figure 10: Average relative citations of different access types of a random sample of WoS articles and reviews with a DOI published between 2009 and 2015.). License: CC BY 4.0.

Which license should you choose?

The Creative Commons Licenses

- Creative Commons are the default option.
- All CC licenses help authors **retain their copyright** while allowing others to make use of their work under certain conditions.

CC-BY

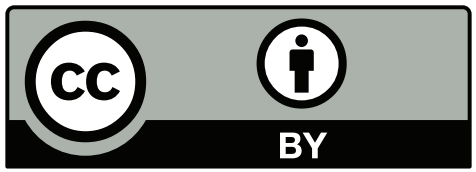


Figure 11: CC-BY. Source: Creative Commons (2018) License: CC BY 4.0.

- The **least restrictive** of all CC licenses.
  - "This license lets others distribute, remix, tweak, and build upon your work, even commercially, as long as they credit you for the original creation" (Creative Commons, 2018).
- CC-BY has become the **gold standard** in OA publishing as it maximizes the dissemination of research findings (Kreutzer, 2014; Redhead, 2012).

Variants of CC-BY

1. CC-BY-NC: Attribution-NonCommercial
2. CC-BY-ND: Attribution-NoDerivs
3. CC-BY-SA: Attribution-ShareAlike
4. CC-BY-NC-ND
5. CC-BY-NC-SA

A spectrum of restrictions

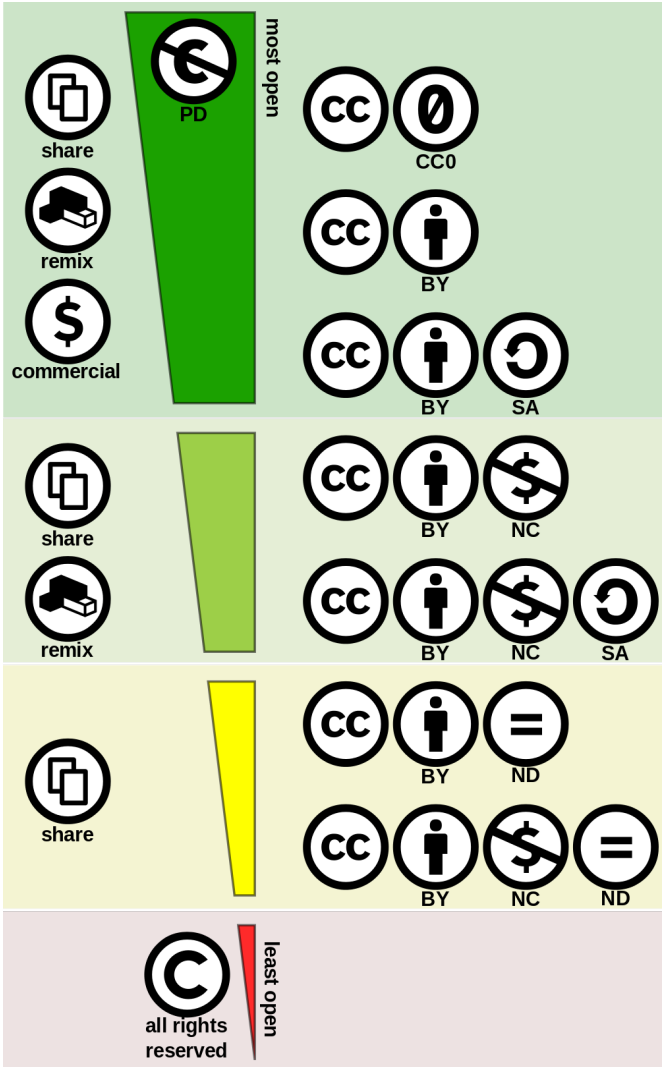
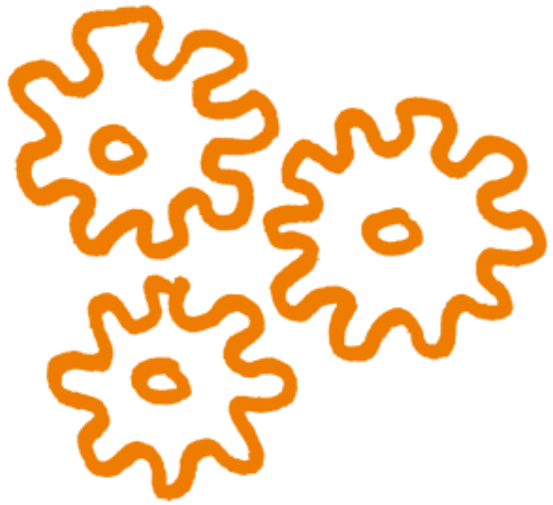


Figure 12: CC license spectrum between public domain (top) and all rights reserved (bottom). Source: Shaddim and Creative Commons (original CC license symbols) (2016) License: CC BY 4.0.

How to find funding for your open access publication?

Funding options

- Do you need to pay APCs?
  - 70% of OA journals are free.
  - Have you thought about self-archiving (green OA)?
- If you need to pay APCs
  1. If you are in a project, look if your funder has an OA publication fund.
  2. Look if your university, faculty, or department has an OA publication fund.
  3. Ask your supervisor if there is internal funding available.
  4. Look if you are admissible for a waiver (lower income countries).



Practical examples

Find a self-archiving policy on SHERPA RoMEO

- Question 1
  - Go to http://www.sherpa.ac.uk/romeo
  - Look for the self-archiving policy of the *European Sociological Review*
  - Which color code was given to the journal and what rights does it grant authors?
- Question 2
  - Go to http://www.sherpa.ac.uk/romeo
  - Look for the self-archiving policy of the *European Journal of Political Research*
  - Which color code was given to the journal and what rights does it grant authors?

Find a gold OA journal on the Directory of Open Access Journals (DOAJ)

- Question 3
  - Go to https://doaj.org
  - Click "Search" in the top menu
  - Look for:
    - ★ **journals**
    - ★ with **Social Sciences** as subject
    - ★ with **no APCs**
    - ★ with a **CC-BY** license
    - ★ where the full text is in **English**
    - ★ and peer review is **double-blind**
  - How many journals can you find?

Look for a preprint on SocArXiv

- Question 4
  - Go to http://socarxiv.org
  - Search a paper on "Protest in Eastern Germany", last edited in July 2018.
  - Click on the title
  - Scroll down the preprint page and click on "Visit project"
  - What additional components are made available by the author?

Thank you!

References I

Bezjak, S., Clyburne-Sherin, A., Conzett, P., Fernandes, P. L., Görögh, E., Helbig, K., ... Verbakel, E. (2018). *Open Science Training Handbook.* Retrieved from https://doi.org/10.5281/zenodo.1212496

Bourne, P. E., Polka, J. K., Vale, R. D., & Kiley, R. (2017, May). Ten simple rules to consider regarding preprint submission. *PLOS Computational Biology*, *13*(5), e1005473. Retrieved 2018-05-24, from http://journals.plos.org/ploscompbiol/article?id=10.1371/journal.pcbi.1005473 doi: 10.1371/journal.pcbi.1005473

Budapest Open Access Initiative. (2017). *BOAI15.* Retrieved 2018-05-24, from http://www.budapestopenaccessinitiative.org/boai15-1

References II

Buranyi, S. (2017, June). *Is the staggeringly profitable business of scientific publishing bad for science?* Retrieved 2018-05-24, from `https://www.theguardian.com/science/2017/jun/27/profitable-business-scientific-publishing-bad-for-science`

Creative Commons. (2018). *About The Licenses.* Retrieved from `https://creativecommons.org/licenses/`

Kreutzer, T. (2014). *Open Content - A Practical Guide to Using Creative Commons Licenses* (R. Bernecker, J. Engelmann, & S. Schomburg, Eds.). Bonn: German Commission for UNESCO; Cologne: North Rhine-Westphalian Library Service Centre; Berlin: Wikimedia Deutschland.

Larivière, V., Haustein, S., & Mongeon, P. (2015, June). The Oligopoly of Academic Publishers in the Digital Era. *PLOS ONE*, *10*(6), e0127502. doi: 10.1371/journal.pone.0127502

References III

Martín-Martín, A., Costas, R., Leeuwen, T. v., & López-Cózar, E. D. (2018, March). Evidence of Open Access of Scientific Publications in Google Scholar: A Large-Scale Analysis. *SocArXiv*. doi: 10.31235/osf.io/k54uv

Piwowar, H., Priem, J., Larivière, V., Alperin, J. P., Matthias, L., Norlander, B., ... Haustein, S. (2018, February). The state of OA: a large-scale analysis of the prevalence and impact of Open Access articles. *PeerJ*, *6*, e4375. Retrieved 2018-05-22, from `https://peerj.com/articles/4375` doi: 10.7717/peerj.4375

Redhead, C. (2012, October). *Why CC-BY?* Retrieved 2018-05-24, from `https://oaspa.org/why-cc-by/`

Shaddim, & Creative Commons (original CC license symbols). (2016). *File:Creative commons license spectrum.svg.* Retrieved 2017-07-17, from `https://commons.wikimedia.org/wiki/File:Creative_commons_license_spectrum.svg`

References IV

SHERPA RoMEO. (2018, July). *RoMEO Statistics.* Retrieved 2018-07-17, from `http://www.sherpa.ac.uk/romeo/statistics.php`

Why Open Research? (n.d.). *Image gallery.* Retrieved 2018-07-17, from `http://whyopenresearch.org/gallery`

Wikimedia Deutschland. (2018). *Fellow-Programm Freies Wissen. Wissenschaft offen gestalten.* Retrieved 2018-07-18, from `https://www.wikimedia.de/wiki/Fellowprogramm`